

MULTIMEDIA



UNIVERSITY

STUDENT ID NO

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# MULTIMEDIA UNIVERSITY

## FINAL EXAMINATION

TRIMESTER 1, 2016/2017

**BTQ3894 – TQM FOR MANAGERS**

( Distance Education )

10 OCTOBER 2016  
09:00 AM – 11.00 AM  
(2 Hours )

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### INSTRUCTIONS TO STUDENTS

1. This question paper consists of **NINE (9)** printed pages, excluding the cover, with:  
**Section A:** Fifteen (15) multiple choice questions, worth 2 marks each (Total: 30 marks).  
**Section B:** Two (2) short-answer questions, worth 10 marks each (Total: 20 marks).  
**Section C:** Two (2) analytical questions, worth 25 marks each (Total: 50 marks).
2. Answer **Section A** on the MCQ Answer Sheet provided.  
All answers to **Section B** should be printed in the Answer Booklet.  
The answer to **Question C.1** and **C.2(ii)** should be printed in the Answer Booklet.  
The answer to **Question C.2(i)** should be drawn on the graph paper supplied.
3. Marks allocations are provided for each question.

## SECTION A: MULTIPLE CHOICE QUESTIONS (40 marks)

Section A is to be answered in the Answer Booklet.

Read each of the items below carefully and then indicate the most appropriate response in your Answer Booklet. All questions are worth 2 marks each. Total: 30 marks.

1. A quality management specialist is giving a workshop on how to improve quality process through accessing "The Voice of the Market". The content of the workshop will most likely deal with which of the following?
  - a. Constructing affinity diagrams
  - b. Benchmarking
  - c. The Juran Trilogy
  - d. Pareto Analysis
  
2. Which of the following statements is true?
  - a. Within Garvin's framework of product quality dimensions, performance deals with goods and conformance deals with services.
  - b. Serviceability refers to the ease and low cost of product repair.
  - c. Services blueprinting cannot be undertaken by a manager. It must be completed by the customer himself or herself.
  - d. All of the statements are true.
  
3. Which of the following was not one of the steps proposed by Armand V. Feigenbaum to improve process quality?
  - a. Random sampling
  - b. Leadership
  - c. Quality technology
  - d. Organizational commitment

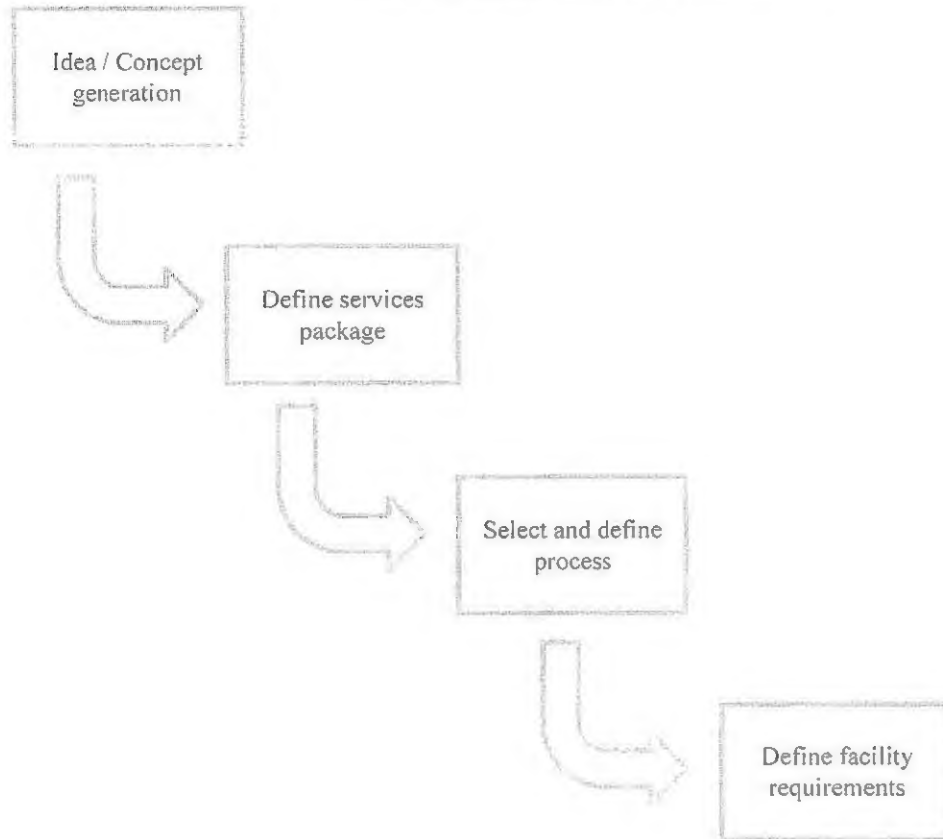
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4. The Baldrige Awards recognize organizations \_\_\_\_\_.
- that have maintained a consistent record of ISO re-certification
  - meeting high levels of ethical conduct in dealing with customers
  - that have shown an exemplary level of innovation in process or product development
  - which demonstrate performance and quality excellence
5. The Operations Manager writes an e-mail to all production supervisors which states that, "workstation operators who maintain an assembly-failure rate below 7% will be eligible for a special holiday bonus during their Annual Leave this year. At company expense, we will fly you and your family to any city in North America and provide you with court-side seats to watch a National Basketball Association (NBA) playoff game of your choice." Which form of leadership power is the Operations Manager exercising?
- Coercive
  - Reward
  - Referent
  - Expert
6. What is a "poka-yoke"?
- A fictional digital creature which humans attempt to capture and train for battle in several different video games.
  - Any mechanism in a lean manufacturing process which aims at eliminating product defects by preventing, correcting or drawing attention to errors by human machine operators as they occur.
  - A worker who completes his or her assignments too slowly to allow the team to accomplish quality time requirements.
  - A line from a Japanese children's song which encourages boys and girls to always do the very best at every endeavor.
7. Which of the following questions would not be asked during a 5w2h approach to benchmarking in a copper wire factory?
- Who has responsibility for the over-all production process?
  - When are inspections carried out?
  - When will we be finished this benchmarking exercise?
  - Why do the fault detection reports go to the senior manager before they are reviewed by the assembly line supervisors?

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Use Diagram 1 to answer Question 8.

**Diagram 1 – A Four Step Process**



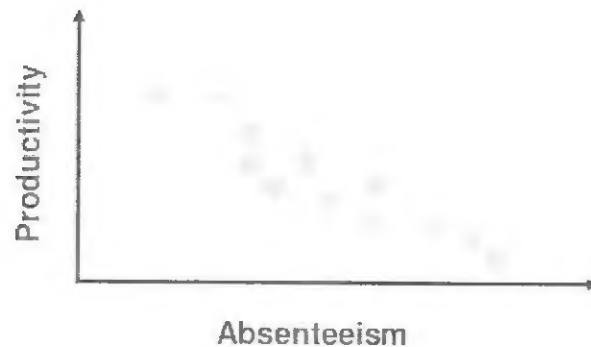
8, Diagram 1 shows the steps involved in developing a \_\_\_\_\_, which provides managers with targets for ensuring product quality is established and maintained.

- a. Quality Function Deployment (QFD)
- b. Customer Benefits Package (CBP)
- c. Moment of Truth Process Chart (MTPC)
- d. None of the above

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Use Diagram 2 to answer Question 9.

**Diagram 2 – The Relationship Between Productivity and Absenteeism**



9. Which of the following statements is true about Diagram 2?
- It shows that, as more people are absent from our unit, our productivity decreases.
  - It is a scatter diagram.
  - It illustrates Shingo's concept of *waste of overproduction*.
  - Both (a) and (b).
10. With which of the following statements would W. Edwards Deming agree?
- Whenever product or process quality is low, it is probably due to attitudinal or skills deficiencies among your employees. Poor quality most often is the result of poor workers.
  - Inspect early and often. Inspect everything. Be vigilant. Mass inspections are the way to ensure quality.
  - The best motivator for quality performance is fear. When workers are concerned about losing their jobs, they make fewer mistakes. Managers who are "too nice" are inviting process failures and product defects.
  - None of the above.
11. Designing products that can be re-used easily or broken down into their component parts and re-manufactured are key principles in which approach to strategic quality planning?
- Just-in-Time Inventory Control
  - Six Sigma
  - Green manufacturing
  - Situational Leadership Model

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Use Diagram 3 to answer question 12.

**Diagram 3 – A Record of Telephone Interruptions**

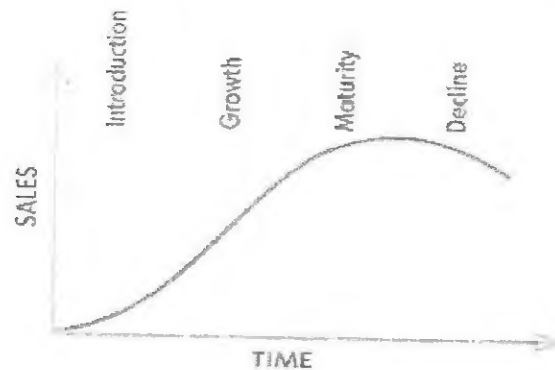
Reason	Day					
	Mon	Tues	Wed	Thurs	Fri	Total
Wrong number	+++		I	+++	+++	20
Info request						10
Boss	+++		+++	I		19
Total	10	9	10	9	13	49

12. Ummi Helen is a senior official in a government economic development agency. Her job is to meet with supervisors of agency-funded business start-ups and rural development projects to advise them on the “best practices” they should use when managing their ventures. Recently, Helen was concerned when she received low ratings on the quality of her advisory services, with clients often remarking that there were too many interruptions by telephone callers or office drop-ins during their consultations with her. Helen created Diagram 3 to record the reason for, and day-of-the-week of, calls which interfered with her work. Which of the following statements are true?
- Helen should not schedule consultation sessions on Tuesdays and Thursdays.
  - Helen has used a control tool known as an affinity diagram and it shows she should change her telephone number.
  - Hiring a secretary/receptionist to handle all incoming calls would not significantly reduce the telephone interruptions during her meetings.
  - Helen should schedule regular meetings or online chats with her boss.
13. From beginning to end, what is the correct order of stages in the development of a team?
- Concept Generation; Customer Response; Empathy
  - Forming; Storming; Norming; Performing; Mourning
  - Administration; Audit; Certification; Continuous Improvement
  - None of the above

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Use Diagram 4 to answer Question 14.

**Diagram 4 – Number of Sales Of a Product Over Time**



14. Which statement accurately describes Diagram 4?
- a. Quality defects are most likely to occur early or late in the history of a product.
  - b. It illustrates the Pareto Principle.
  - c. It shows the product life cycle.
  - d. The older the product, the more better it gets and the more money we earn.
15. Dr. Safrina is drawing a process flow chart to indicate the different stages that her nursing staff must follow when filing the results of blood tests and x-rays. This will help the clinic maintain a high level of service quality in their dealings with Dr. Safrina's patients. Which will be the first symbol she uses on her flow-chart, symbolizing the initial step in the process?



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## SECTION B: SHORT ANSWER QUESTIONS

**Print answers to Section B in the Answer Booklet.**

1. Within which sphere of quality would each of the following actions be placed? (2 marks each. Total: 10 marks)
  - a. En. Razali conducts an inspection to measure whether the copper wire produced on the factory's assembly line has the necessary diameter and tensile strength.
  - b. Jhoi changes the filters in all her pet shop aquariums to ensure that the fish she is selling receive sufficient oxygen, and that the water in the tanks does not smell stale and unpleasant.
  - c. Jyothi conducts training sessions for administrative staff at Columbia Asia Hospital, aimed at improving their attitudes toward dealing with impatient or unhappy patients.
  - d. The Library Management Committee at a major Malaysian university votes to budget the funding for ISO9001 certification of asset management procedures.
  - e. An alarm rings and light flashes on the production line of a chemical manufacturing plant when sensors detect that the acid concentration of an industrial cleansing agent has become dangerously high.
  
2. Indicate whether each of the following statements is TRUE (T) or FALSE (F) (2 marks each. Total: 10 marks)
  - a. The PZ&B dimensions are useful for defining service quality, but not quality of manufactured goods.
  - b. The "bathtub function" shows that faults are most likely to occur early or late in the product life-cycle, not during the useful life of the product.
  - c. As product quality increases, unit price decreases.
  - d. A process flowchart indicates which activities in production systems are most important.
  - e. The Deming Prize is given by the Japanese Union of Scientists & Engineers to organizations achieving a high level of quality performance.

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## SECTION C: APPLYING THE TOOLS OF QUALITY

Answers to Section C should be printed in the Answer Booklet.

1. As a birthday gift, Suhaila is trying to make miniature tables and chairs for her younger sister's dollhouse. She went to the hobby craft-shop and purchased a woodworking kit that includes soft balsa wood, glue, tiny woodscrews and instructions for assembling the items in her father's workshop. Last night, after her little sister's bedtime, she borrowed a screwdriver from her father and happily went to work putting the small tables and chairs together for the dollhouse.

But, over and over, whenever she tried to insert the woodscrews according to the instructions, the soft balsa wood cracked and splintered. The miniature tables and chairs, as a result, were lopsided, broken and easily fell apart.

Because she considered herself a perfectionist and wanted only the best for her little sister's birthday, Suhaila discarded any furniture that was not assembled exactly according to the pictures on the box of the woodworking kit. None of them were good enough.

Suhaila tried and tried, but could not figure out what was causing the problem to occur. No matter what she tried to do differently, the wood still splintered and cracked, leaving the doll furniture unstable, faulty and ugly.

Swallowing her frustration and sadness, she remembered that you studied about product quality in one of your distance education subjects and she now rings you on your handphone. "Please, I am desperate," she tells you. "My little sister will be awake in a few hours and she will be so disappointed if I have no present for her. Can you help me figure out what is causing this effect?"

- (a) Draw an **Ishikawa Diagram** to identify and categorize the causes of the wood breakage. (20 marks)
- (b) Based on the diagram you have created, tell Suhaila what is the most likely cause of her problem and give her a suggestion about how it can be corrected. (5 marks)

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Use Table 1 to answer Question C.2 below:

**Results of a SERVQUAL Analysis at Your Starbuck's Coffee Outlet**

Service Quality Dimensions	Average Scores on SERVQUAL Questionnaire			
	Customers		Staff	
	P	E	P	E
Tangibles	5.5	4	6.8	6.4
Reliability	3.8	5.6	4.2	4.3
Responsiveness	3.4	6.7	5	5
Assurance	4	4.3	5.5	5
Empathy	3	2.5	6	6.8

2. Assume you are the Branch Manager of the Starbuck's Coffee franchise at D'Pulze Shopping Mall in Cyberjaya. Your head office has instructed you to carry out a SERVQUAL Analysis of service quality in your premises and to conduct a gap analysis of differences in perceived quality among customers and staff

As per head office instructions, you administered a standard 44-item SERVQUAL questionnaire to 200 customers and to each of your 12 staff. The questionnaire resulted in customer and staff scores for Perception (P) and Expectation (E) for each of five service quality dimensions: Tangibles, Reliability, Responsiveness, Assurance and Empathy. You averaged the scores and entered them on the correct line and column of Table 1.

- (a) Use the information in Table 1 to construct a **Two-Dimensional Differencing Plane**, with Expectation graphed along the horizontal axis and Perception graphed on the vertical axis. **Use the graph paper supplied** (14 marks).
- (b) Compare and contrast customers' perceived quality of your Starbuck's outlet with your staff members' perceived quality. **Print your answer in the Answer Booklet** (11 marks).

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